

# Work Order ID 52714

October 08, 2009 2:35:44 PM



Page 1

Item ID: D3943-051 Accept

Revision ID: AB 10/10/29

Item Name: Handle Assembly

Start Date: 10/13/2009 Start Qty: 1.00

Required Date: 10/19/2009 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: mf Date: 09-10-08 Tooling: Date:

QC: Date: SPC (Y/N): Date:

Setup Start

Stop

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3943-	Rev. A
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100 Weld per dwg A/R Steel rod Batch: 112060 0.00



Large Fab	Memo	0.00
Large Fab		

PL 9-10-15

110 QC5- Inspect part completeness to step on W/O 0.00



QC	Memo	0.00
Quality Control		

11B 09.10.15 D

120 QC9- Inspect visual per QSI004- Fusion Welds 0.00



QC	Memo	0.00
Quality Control		

PL 09 10 15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod-Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 52714

October 08, 2009 2:35:44 PM



Page 2

Item ID: D3943-051

Accept



Setup Start



Revision ID: A

Stop



Item Name: Handle Assembly

Start Date: 10/13/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/19/2009 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

Fire Red(Ref:4.3.5.10) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

\*\*\*mask all threads prior to powder coating\*\*\*

Spray paint yellow  
with Bentone CG1031B

POWDER COAT:

Start Time: \_\_\_\_\_

Oven Temperature: \_\_\_\_\_

Finish Time: \_\_\_\_\_

09 10 15 0

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

L

09-10-16

150

Identify as per dwg & Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

pulled  
on w/o  
52714  
D3943-041

MF 09-10-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

**Work Order ID 52714**

October 08, 2009 2:35:44 PM



Page 3

Item ID: D3943-051

Accept



Setup Start



Revision ID: A

Stop



Item Name: Handle Assembly

Start Date: 10/13/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 10/19/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/10/29

MF 09-10-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

October 08, 2009 2:35:44 PM

Page 1

Work Order ID: 52714

Parent Item: D3943-051RevA

Parent Item Name: Handle Assembly



Comments:

Start Date: 10/13/2009

Required Date: 10/19/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3943-1RevA 		Manufactured	No		<i>N</i> <i>A</i>	100	Each	0.0000	1.0000			
Handle						<i>mf 09-10-13</i> <i>MS2094 x 1</i>					<i>EL</i>	<i>9-10-14</i>
D3943-5RevA 		Manufactured	No			100	Each	6.0000	1.0000			
Plate												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

6

52095

6

D3943-7RevA

Manufactured

No

100

Each

20.0000

2.0000



Stud

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

20

48337

2

52096

8

52192

4

52278

6

*EL 9-10-14*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ITEM No.	QTY -041	QTY -051	QTY -053	PART NUMBER	DESCRIPTION	PREFERRED SUPPLIER
1	X			D3943-041	GROUND HANDLING CRANK ASSEMBLY	
5	1	X		D3943-051	HANDLE ASSEMBLY	
6	1		X	D3943-053	CHAIN ASSEMBLY	
11		1		D3943-1	HANDLE	M/F HANDLE FROM DIS-ASSEMBLED ITEM 39
12	1			D3943-3	HANDLE EXTENSION	
13		1		D3943-5	PLATE	
14		2		D3943-7	STUD	
15			1	D3943-9	CHAIN	USE CHAIN SUPPLIED WITH ITEM 39
21	1			D2690-4	LANYARD	
22	1			D3585-1	SET SCREW	
23	1			D3949-041	REMOVE BEFORE FLIGHT FLAG	
24			1	D3954-5	CHAIN LUG	
25	1			D3954-7	RATCHET LUG	
26			1	D3954-9	GWT CHAIN PIN	
31	1			AN4-10A	BOLT	
32	1			AN960-416	WASHER	
33	1			MS21042-4	NUT	
39	1			8143919	LEVER CHAIN HOIST (POWER FIST)	PRINCESS AUTO / 4000 lbs CAPACITY
41	1			S-1475	SPRING	REID SUPPLY
42	1			3408A59	BALL PLUNGER	McMASTER CARR
43	3			HX-15	SOCKET HEAD CAP SCREW 4-20 UNC X 0.75 LG	HASKINS

# 52714

RELEASED  
09/05/13

A	NEW ISSUE	AJS	09.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS	DRAWING NO.	REV. A
CHECKED		D3943	SHEET 1 OF 5
MFG. APPR.		TITLE	SCALE
APPROVED		GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.		COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	09.05.13		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

D

C

B

A

REMOVE AND RETAIN  
RUBBER HAND GRIP

DISCARD PIN

RETAIN PIN

REMOVE &  
DISCARD HOOK

REMOVE & DISCARD HOOK

8143919 LEVER CHAIN HOIST  
(SHOWN PRIOR TO MODIFICATION)  
(CHAIN SHOWN SHORTENED FOR CLARITY)

8143919  
LEVER CHAIN HOIST

(CHAIN NOT SHOWN FOR CLARITY)

AN4C10  
AN960C416 WASHER  
MS21043-4 NUT

3408A59  
BALL PLUNGER

RE-INSTALL  
RUBBER HAND-GRIP  
HERE

D3943-3  
HANDLE EXTENSION

D2690-4 LANYARD

D3949-041 FLAG

HX-15 S/H CAP SCREW

HX-15 S/H CAP SCREW  
S-1475 SPRING

D3585-1 SET SCREW

RE-INSTALL PIN

D3943-7 RATCHET LUG



D3943-053 CHAIN ASSY

(CHAIN SHOWN SHORTENED FOR CLARITY)

D3943-041 GROUND HANDLING CRANK ASSEMBLY

NOTES -041:

- 1) MATERIAL: N/A
- 2) FINISH: DISASSEMBLE LEVER CHAIN HOIST (ITEM 39) AND POWDER COAT "RED" (4.3.5.10) PER DART QSI 005 4.3 PARTS INDICATED
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3943-041" USING FINE POINT PERMANENT INK MARKER

DESIGN	DSTOW/AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3943	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.	N/A	GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	09.05.13	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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RELEASED  
09/05/13

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

D3943-1 HANDLE

2 PL

9.75

2.00

Ø0.30  
THRU

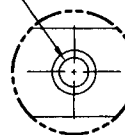
Ø0.12  
THRU

0.41

D3943-7 STUD  
2 PL

THREAD  $\frac{1}{4}$ -20 UNC-2B  
2 PL

THREAD  $\frac{1}{4}$ -20 UNC-2B  
THRU



VIEW A-A A5-3  
(SCALE 2X) B5-3

2 PL

9.37

A B1-3




A B1-3

D3943-5 PLATE

# D3943-051 HANDLE ASSEMBLY

## NOTES -051:

- 1) MATERIAL : N/A
- 2) FINISH: POWDER COAT "RED" (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: X.XX DIMENSIONS +/- 0.06 ALL OTHERS  
PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) MASK ALL THREADS PRIOR TO POWDER COATING

DESIGN	DSTOW / AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3943	SHEET 3 OF 5
APPROVED		TITLE	SCALE
DE APPR.	N/A	GROSS WEIGHT TOW CRANK ASSY	NT
DATE	09.05.13	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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#52714

RELEASED  
8/06/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

D

D

D3943-9 CHAIN

D3954-5 CHAIN LUG

C

C

B

B

D3954-9 GWT PIN

# D3943-053 CHAIN ASSEMBLY

#52714

**RELEASED**  
27/6/03 JWD

## **NOTES -053:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELD PER QSI 004
- 9) MASK CHAIN FROM THIS POINT ON PRIOR TO POWDER COATING

DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG APPR.	<i>[Signature]</i>	D3943	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>N/A</i>	GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	09.05.13	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT AND NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

8 7 6 5 4 3 2 1

A

A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

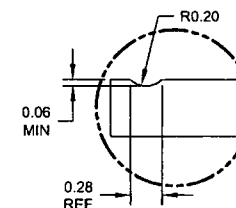
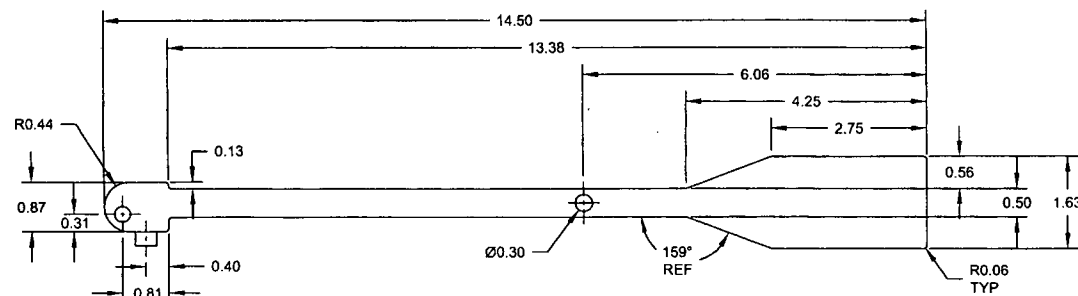
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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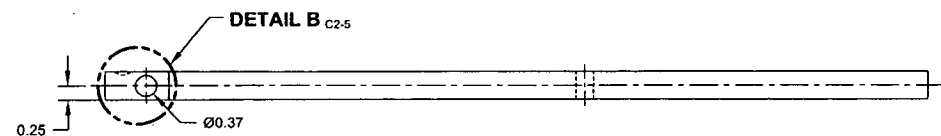
**NOTE:** Date & initial all entries



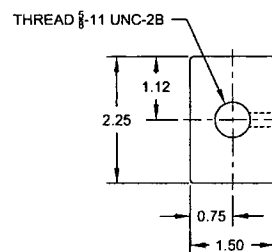
8 7 6 5 4 3 2 1



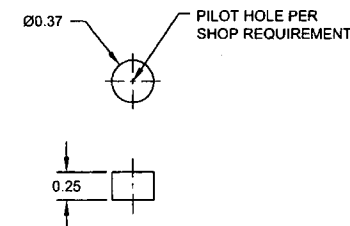
**DETAIL B-B**  
(Dimple Detail)  
(Scale 2X)



**D3943-3 HANDLE EXTENSION**



**D3943-5 PLATE**



**D3943-7 STUD**  
(Scale 2X)

#52714

**NOTES -11/-13:**

1) MATERIAL -3 & -5: MILD STEEL, SHEET  
AISI 1010-1025 OR ASTM A36/A366/A1008  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-S

OR : MILD STEEL, BAR  
AISI 1010-1025 OR ASTM A36/A366/A569/A570  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-B

-7: MILD STEEL, ROUND BAR  
AISI 1018-1025  
PER MIL-S-7097  
REF DART SPEC M1018-R

- 2) FINISH -3: POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3 PARTS INDICATED
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A

**RELEASED**  
9/16/13

DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D3943	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GROSS WEIGHT TOW CRANK ASSY NTS	
DATE	09.05.13	COPYRIGHT © 2009 BY DART AEROSPACE LTD.	
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
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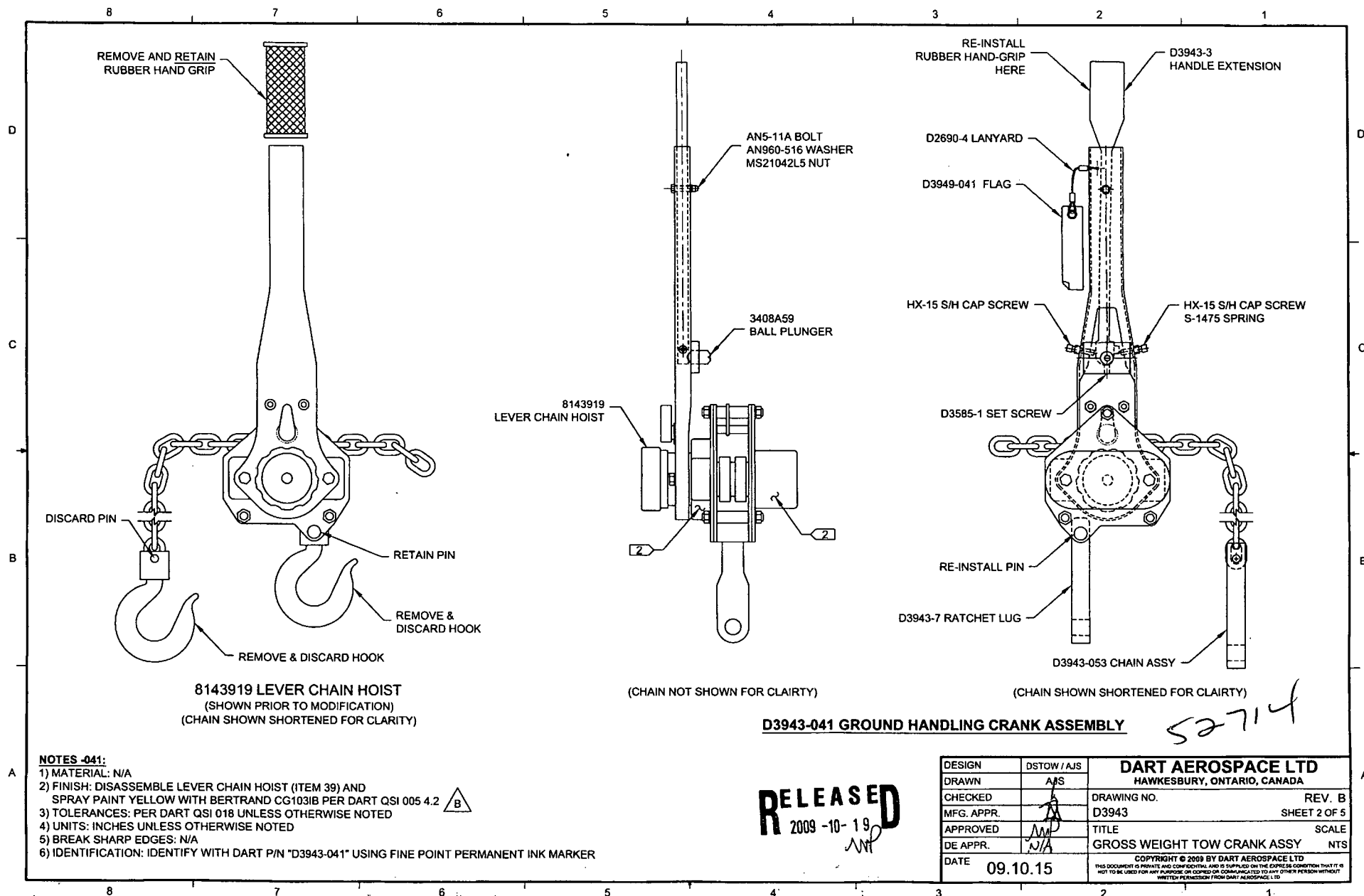
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

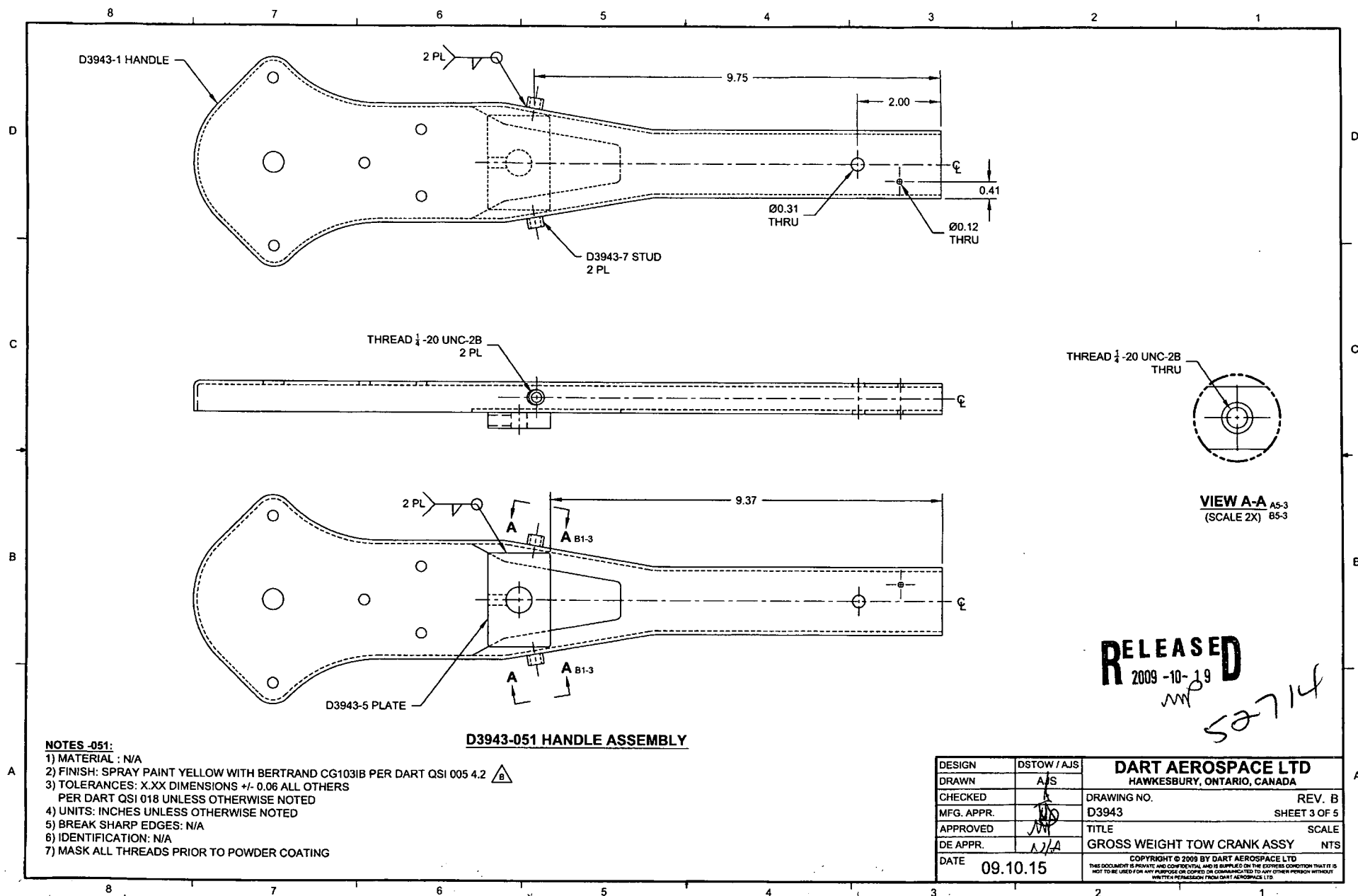
**NOTE:** Date & initial all entries

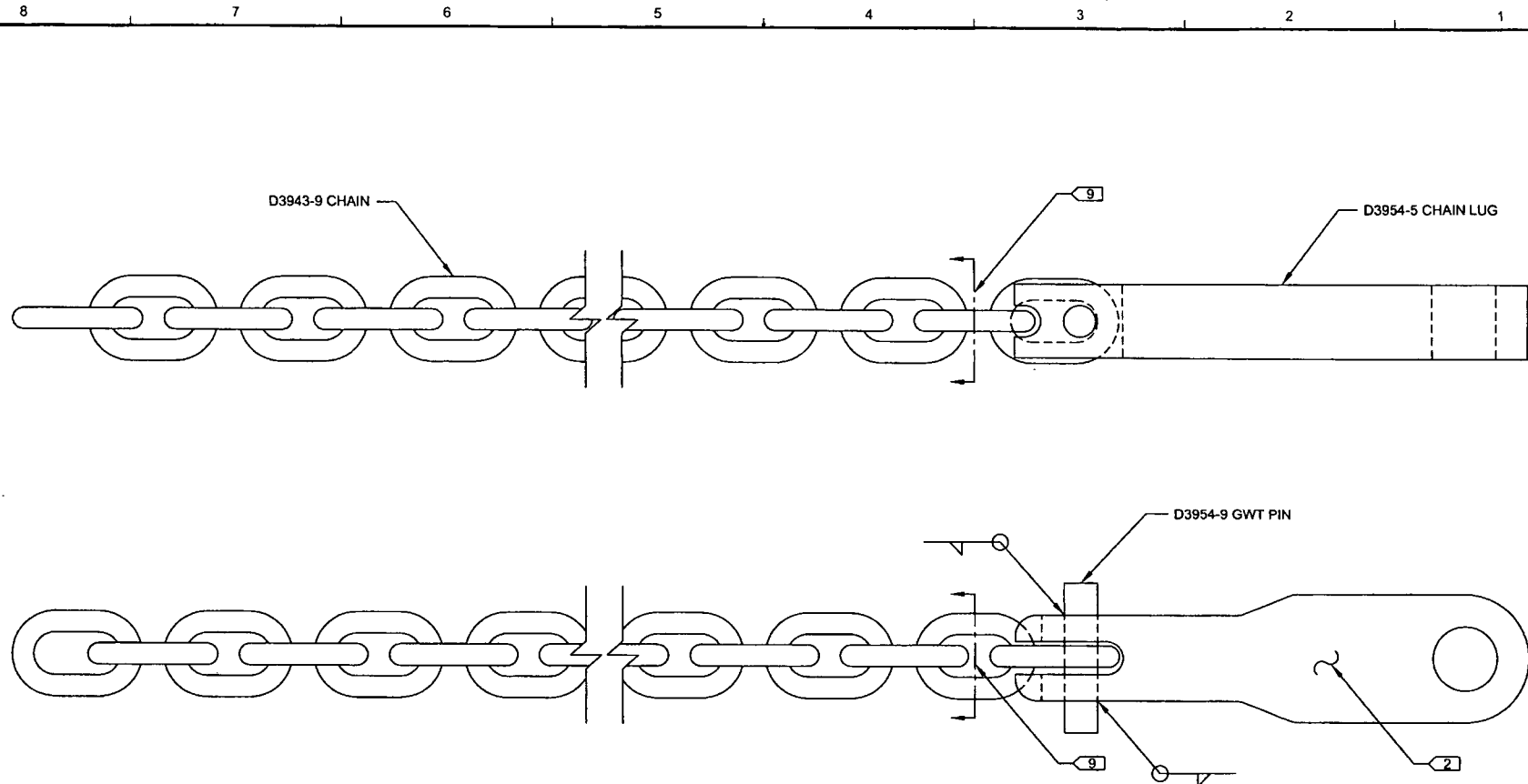
ITEM No.	QTY -041	QTY -051	QTY -053	PART NUMBER	DESCRIPTION	PREFERRED SUPPLIER
1	X			D3943-041	GROUND HANDLING CRANK ASSEMBLY	
5	1	X		D3943-051	HANDLE ASSEMBLY	
6	1		X	D3943-053	CHAIN ASSEMBLY	
11		1		D3943-1	HANDLE	M/F HANDLE FROM DIS-ASSEMBLED ITEM 39
12	1			D3943-3	HANDLE EXTENSION	
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14		2		D3943-7	STUD	
15			1	D3943-9	CHAIN	USE CHAIN SUPPLIED WITH ITEM 39
21	1			D2690-4	LANYARD	
22	1			D3585-1	SET SCREW	
23	1			D3949-041	REMOVE BEFORE FLIGHT FLAG	
24			1	D3954-5	CHAIN LUG	
25	1			D3954-7	RATCHET LUG	
26			1	D3954-9	GWT CHAIN PIN	
31	1			AN5-11A	BOLT	
32	1			AN960-516	WASHER	
33	1			MS21042L5	NUT	
39	1			8143919	LEVER CHAIN HOIST (POWER FIST)	PRINCESS AUTO / 4000 lbs CAPACITY
41	1			S-1475	SPRING	REID SUPPLY
42	1			3408A59	BALL PLUNGER	McMASTER CARR
43	3			HX-15	SOCKET HEAD CAP SCREW $\frac{1}{4}$ -20 UNC X 1.0 LG	HASKINS

**RELEASED**  
2009-10-19

B	SHT 1 PL, ITEM 31 WAS AN4-10A, ITEM 32 WAS AN960-416, ITEM 33 WAS MS21042-4, ITEM 43 WAS 0.75 LG. SHEETS 2 - 5 NOTES: FINISH FOR ALL COMPONENTS NOW YELLOW SPRAY PAINT.		AJS	09.10.15
A	NEW ISSUE		AJS	09.05.13
REV.	DESCRIPTION		BY	DATE
DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN	AJS	DRAWING NO.	REV. B	
CHECKED		D3943	SHEET 1 OF 5	
MFG. APPR.		TITLE	SCALE	
APPROVED		GROSS WEIGHT TOW CRANK ASSY	NTS	
DE APPR.	N/A	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		
DATE	09.10.15			











# **D3943-053 CHAIN ASSEMBLY**

## **NOTES -053:**

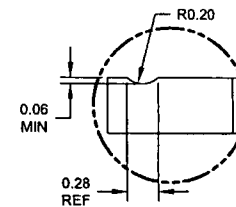
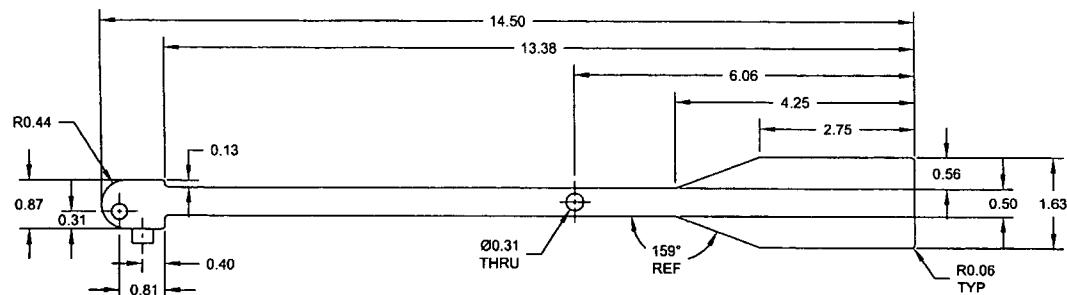
- 1) MATERIAL: N/A
- 2) FINISH: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2 
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELD PER QSI 004
- 9) MASK CHAIN FROM THIS POINT ON PRIOR TO POWDER COATING

DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3943	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	09.10.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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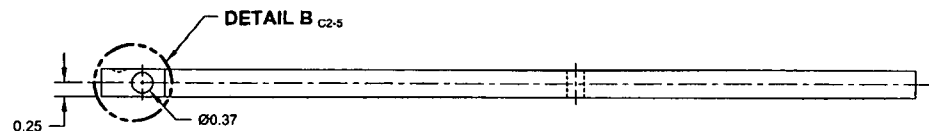
**RELEASED**  
2009-10-18  
MP

52714

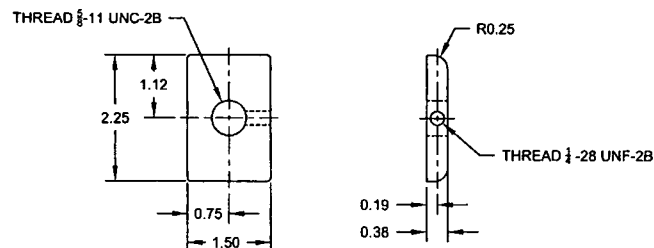
8 7 6 5 4 3 2 1



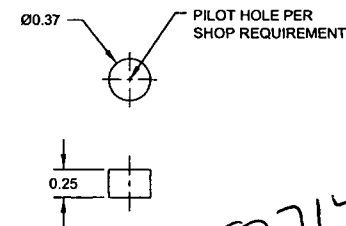
**DETAIL B-B** C7-5  
(DIMPLE DETAIL)  
(SCALE 2X)



**D3943-3 HANDLE EXTENSION**



**D3943-5 PLATE**





**D3943-7 STUD**  
(SCALE 2X)

**NOTES -11/-13:**

- 1) MATERIAL -3 & -5: MILD STEEL, SHEET  
AISI 1010-1025 OR ASTM A36/A366/A1008  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-S
- OR : MILD STEEL, BAR  
AISI 1010-1025 OR ASTM A36/A366/A569/A570  
OR CSA G40-21, 38W/44W/50W/60W/70W  
REF DART SPEC M1010-B
- 7: MILD STEEL, ROUND BAR  
AISI 1018-1025  
PER MIL-S-7097  
REF DART SPEC M1018-R

- 2) FINISH -3: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A

52714  
**RELEASED**  
2009-10-19  
MT

DESIGN	DSTOW / AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3943	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		GROSS WEIGHT TOW CRANK ASSY	NTS
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8 7 6 5 4 3 2 1